

A Checklist of the Birds of Singapore Island

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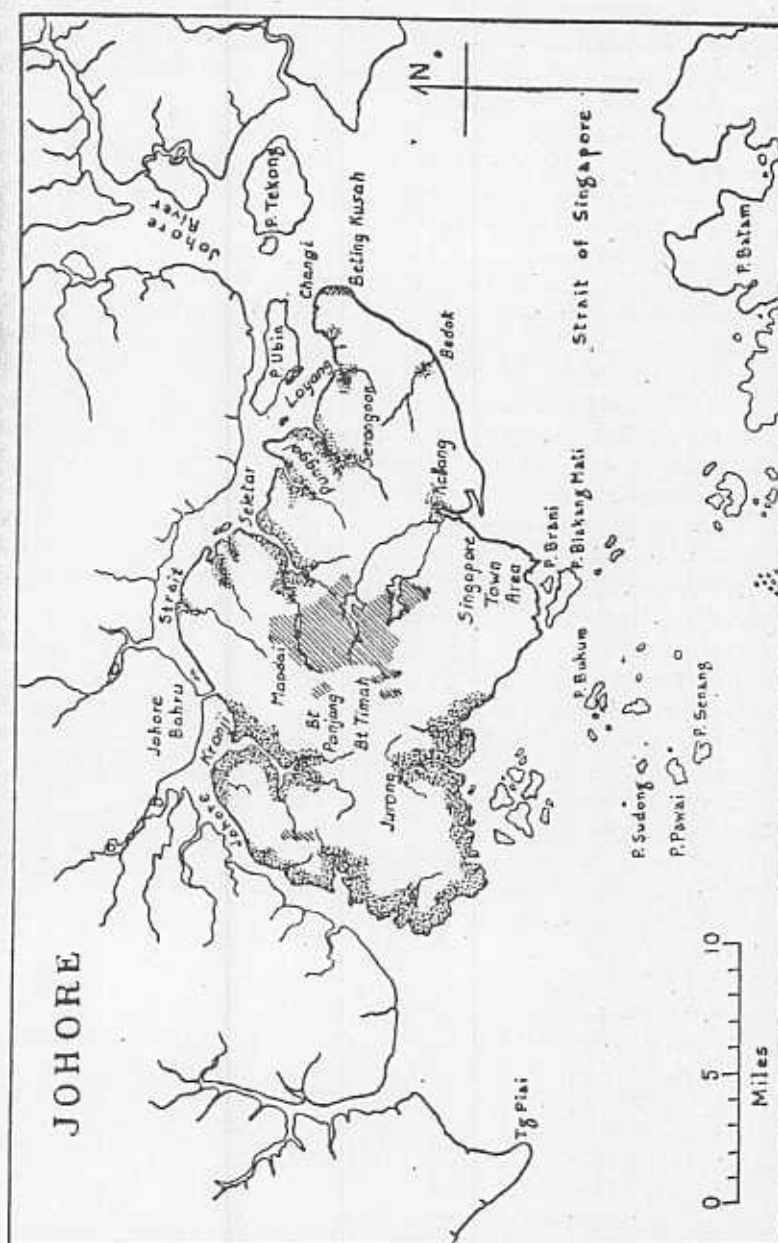
(Completed, June 1949)

The following list has been drawn up to show the birds occurring or likely to occur on Singapore Island at the present time. It is confined to these limits. The area considered is restricted to the island and its immediate coastal waters. Birds known from the neighbouring islets but not yet recorded on Singapore Island have not been included, though in a few cases reference is made in the notes to the fact that species which are scarce in our area are apparently numerous a few miles away.

Birds are admitted as residents or regular visitors only if there is evidence that they have been encountered here in the last thirty years. Nineteenth century records of sedentary birds are given in a short note at the beginning of the family concerned, not on the list itself, if they have not been confirmed in this period. On the other hand genuine vagrants and strays have been admitted where it seemed that the identification was sound, on the grounds that such birds might turn up again.

The list has been compiled from published records, specimens in the Raffles Museum and field data collected by the present writer. Much valuable information has also been supplied by Mr. F. G. H. Allen, Mr. E. H. Bromley and Dr. B. D. Molesworth, all of whom have kindly read the first draft of this paper and supplied critical comments based on their personal experiences. It is hoped that the resultant summary of the status of the resident birds and the regular visitors gives a reasonably accurate survey of existing conditions.

The principal nineteenth century sources are the list published by Hume (1879-80), the papers by Kelham (1881-2) and the British Museum Catalogue (1874-95, 27 vols.). Some of the birds given in these works are certainly not on the island in a feral condition at the present time. In a few cases the authors probably worked from trade skins which were wrongly localised; in other instances their identifications were undoubtedly at fault; for the rest it would seem that the clearing of the greater part of the island's wooded areas has resulted in a definite reduction in the range of its avifauna. No use has been made here of the paper published by Major H. R. Baker (Journ. Bombay Nat. Hist. Soc., 17: 755-764), in view of the uncertainty surrounding the value of a number of his identifications which were made by reference to a popular book on Indian birds. Considerable assistance has been derived from the preliminary list compiled by



Sketch map of Singapore Island and immediate surrounding areas. The mangrove zone (shown by stippling) and the heavily wooded areas (shown by diagonal shading) are marked on Singapore Island only.

F. N. Chasen (1923; *corrigenda & addenda* 1925), but unfortunately he seldom states the source of individual records.

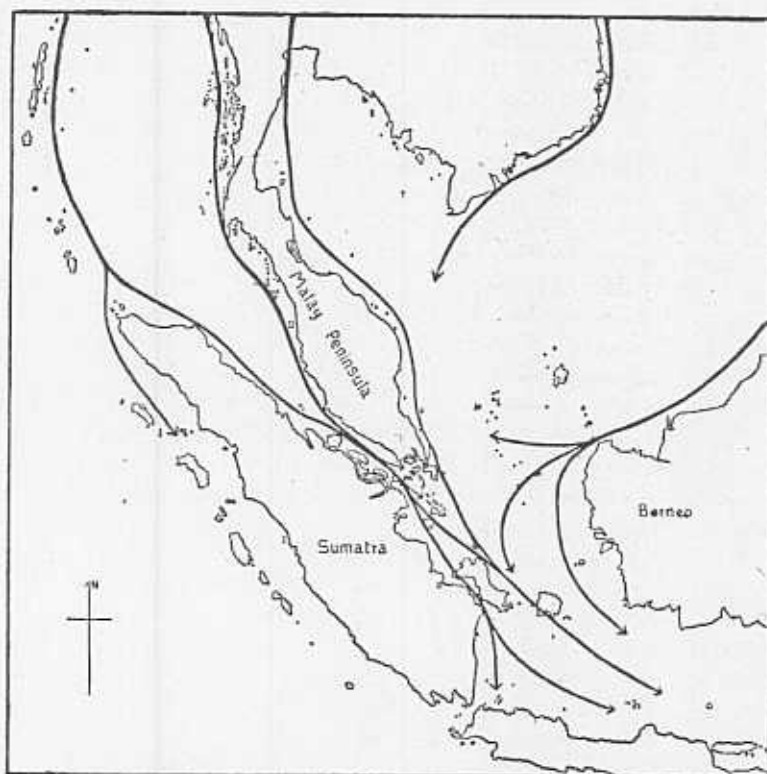
The birds entered on this list are given the numbers allotted to them in the annotated checklist of Malayan birds (Gibson-Hill, *Bull. Raff. Mus.*, 20, 1949) to facilitate cross-reference. It will be seen that in some cases the status accorded is different on the two lists. Certain species which are resident in Malaya as a whole are apparently only non-breeding visitors to Singapore Island. In addition on the present list winter visitors are not shown as passage-migrants also, unless the numbers normally seen during the passage period are appreciably greater than those during the intervening winter months. The limited amount of material at present available suggests that in most species the main autumn migratory streams pass south on either side of the island, not over it, and that for the most part it is only a back-wash which reaches us here (see map 2).

The sources of the unusual records are shown here in the same manner as on the Malayan checklist. Records of rare vagrants or scarce visitors based on specimens still in the Raffles Museum and examined by the present writer have the collector's name, where it is known, given in italics in brackets after the record. Where a collector is not known the skin is marked "(c.n.k.)." Where it was taken by a native collector working for one of the Malayan Museums it is shown as "(nat. coll.)." Records based on published data are marked with the name of the author, the date of publication of the reference and the page number, as "(Hume, 1880: 118)." Information from MS notes or personal communications show the author's name in ordinary type. Resident birds are marked with an asterisk when definite evidence of their breeding on the island is available; this information is summarised in an appendix (*infra*, pp. 177-80).

This list accepts a total of 280 birds, 151 of which are almost certainly resident on the island, while a further 5 are probably resident here. Only some 70-80 of these birds can be regarded as at all common; about 50 are rare in our area, or are confined to very limited habitats. About 40 of the 124 non-resident birds occur regularly as winter visitors or passage migrants in reasonable numbers; some are very plentiful during the period of their stay here. In addition the numbers of a few of the resident birds are noticeably greater during the winter months. The remaining 80 visitors only reach our area in very small numbers, occasionally, or as vagrants represented so far by one or two records. On the whole it would seem that about half the birds on this list should be encountered in the course of 2-3 years by anyone in a position to work over the full range of habitats present on the island. The remainder would only come his way slowly and over a long period.

BIRDS OF SINGAPORE ISLAND

In general the avifauna is similar to that of the coastal belt round the southern portion of the peninsula, except for the relative scarcity or absence of the jungle-haunting species. On the other hand some of the birds of the coastal region are extremely common on the island and are encountered freely in open gardens all round the town. The true woodland birds are largely or entirely confined to the one remaining forest area, covering the catchment basins of the Seletar, Pierce and Mac-Ritchie Reservoirs and part of the slopes of Bukit Timah and Bukit Panjang (marked by diagonal shading on map 1).



Sketch map giving approximately the lines apparently followed by the main mass of the southward bound passage migrants along the coasts of the Malay Peninsula and down to the west end of the Java Sea. Singapore lies in the concavity in the coast at the extreme south end of the peninsula between, but away from, the two major lines of migration. It is probable that the majority of the surviving birds follow the same routes northward.

Checklist of the Birds of Singapore Island

Family HYDROBATIDAE

Genus *Oceanodroma* Reichenbach

2. *Oceanodroma m. monorhis* Winter visitor eastern end
(Swinh.). Singapore Strait, Sep-
Swinhoe's Petrel. tember-May. Occasional-
ly reaches waters off
Singapore Island.

Family PELECANIDAE

Genus *Pelecanus* Linné

5. *Pelecanus onocrotalus* Linn. Rare vagrant. Most recent
White Pelican. formal record January
1903 (nat. coll.).

Family SULIDAE

Genus *Sula* Brisson

7. *Sula leucogaster plotus* Rare vagrant. Taken Davi-
(Forst.). son (Hume and Davison,
Brown Booby. 1878: 493). Seen 1948
(Le Mare).

Family FREGATIDAE

Genus *Fregata* Lacépède

11. *Fregata a. ariel* (G. R. Gray). Occasional visitor. Several
Least Frigate-bird. recent visual records; no
formal record.

Family ARDEIDAE

There was formerly a specimen of the Javanese Pond-Heron,
Ardeola speciosa (Horsf.), in the Berlin Museum which was said
to have come from Singapore, but it was almost certainly
wrongly localised.

Genus *Ardea* Linné

12. *Ardea s. sumatrana* Raffles. Occasional visitor.
Dusky-grey Heron.
13. *Ardea cinerea rectirostris* Occasional visitor.
Gould.
Grey Heron.
14. *Ardea purpurea manilensis* Scarce winter visitor.
Meyen. Recent visual records
Purple Heron. (Edgar, Molesworth, F.
G. H. Allen, *in litt.*).

BIRDS OF SINGAPORE ISLAND

Genus *Butorides* Blyth

- 15a. *Butorides striatus javanicus* (Horsf.). Resident.* Common in the mangrove belt and on muddy beaches, occasionally straying to neighbouring areas.
Little Green Heron.
- 15b. *Butorides striatus amurensis* Schrenck. Rare vagrant. One record, January 1921 (*de Fontaine*).
Siberian Little Green Heron.

Genus *Ardeola* Boie

16. *Ardeola bacchus* (Bp.). Scarce winter visitor. Recent visual records (Molesworth 1940, F. G. H. Allen 1948, *in litt.*).
Chinese Pond-Heron.
17. *Ardeola ibis coromanda* (Bodd.). Winter visitor. Common in suitable localities, October-March.
Cattle Egret.

Genus *Egretta* T. Forster

18. *Egretta alba modesta* (Gray). Winter visitor, in small numbers, November-April; stragglers to early May (Bromley, *in litt.*).
Large Egret.
19. *Egretta g. garzetta* (Linn.). Winter-visitor, very small numbers, October-March. Found with No. 18, but less numerous except in the autumn months.
Little Egret.
20. *Egretta eulophotes* (Swinh.). Rare vagrant. Only record for Malaya, Seletar, 29 September, 1940 (Molesworth; see Gibson-Hill, 1949a: 99).
Chinese Egret.

Genus *Demigretta* Blyth

22. *Demigretta sacra* (Gmel.). Resident, in small numbers. Seen mostly on rocky off-lying islets, but occasionally on suitable shores on Singapore itself.
Reef Heron.

Genus *Nycticorax* T. Forster

23. *Nycticorax n. nycticorax* (Linn.). Night Heron. Rare vagrant. One formal record; imm. ♂, Ponggol, 13 December, 1915 (See Robinson and Chasen, 1936: 188). Visual record, December 1948 (F. G. H. Allen, *in litt.*).

Genus *Gorsachius* Bonaparte

24. *Gorsachius m. melanolophus* (Raffles). Tiger Bittern. Scarce winter visitor.

Genus *Ixobrychus* Billberg

25. *Ixobrychus s. sinensis* (Gmel.). Yellow Bittern. Winter visitor, very small numbers, October-March. Chasen (1922: 95) says common, but this is not so now.
26. *Ixobrychus cinnamomeus* (Gmel.). Chestnut Bittern. Resident,* in small numbers. Augmented by winter visitors and not uncommon in suitable localities October-March.

Genus *Dupetor* Heine & Reichenow

28. *Dupetor f. flavicollis* (Lath.). Black Bittern. Scarce winter visitor. Recent visual record (Molesworth, 1940, *in litt.*).

Genus *Botaurus* Stephens

29. *Botaurus s. stellaris* Linn. Great Bittern. Rare vagrant. One record, autumn 1908 (*nat. coll.*).

Genus *Leptoptilos* Lesson

34. *Leptoptilos javanicus* (Horsf.). Lesser Adjutant. Occasional visitor. Kelham (1882: 190) says that a pair were resident at Tanglin when he was stationed there. Unconfirmed report of breeding on outskirts of town about 1938.

BIRDS OF SINGAPORE ISLAND

Family ANATIDAE

Genus *Dendrocygna* Swainson

36. *Dendrocygna j. javanica* (Horsf.). Whistling Teal. Non-breeding visitor, in small numbers.

Genus *Nettapus* Brandt

41. *Nettapus c. coromandelianus* (Gmel.). Cotton Teal. Occasional visitor, encountered less frequently than No. 36 above.

Family ACCIPITRIDAE

Hume (1879: 44) lists *Accipiter stevensoni* Gurney, quoting Wallace (1868: 216). It seems unlikely that *stevensoni*, if distinct from No. 50 below, has occurred in our area, and the record is assumed here to be based on an erroneous identification of a specimen of *A. virgatus gularis* (Temm. & Schleg.).

Genus *Elanus* Savigny

42. *Elanus c. caeruleus* (Desfont.). Blackwinged Kite. Scarce winter visitor.

Genus *Aviceda* Swainson

45. *Aviceda leuphotes* (Dumont). Blackcrested Baza. Scarce winter visitor, seen occasionally in small flocks, November-March.

Genus *Pernis* Cuvier

- 46a. *Pernis apivorus ptilorhyncus* (Temm.). Resident Honey-Buzzard. Occasional visitor.
46b. *Pernis apivorus orientalis* Tacz. Siberian Honey-Buzzard. Winter visitor, in small numbers, reported December-February.

Genus *Milvus* Lacépède

47. *Milvus migrans govinda* Sykes. Pariah Kite. Rare vagrant. One formal record, 21 October, 1879 (*Kelham*). Two unconfirmed visual records, winter 1948-49 (F. G. H. Allen, Bromley, *in litt.*).

Genus *Haliastur* Selby

48. *Haliastur indus intermedius* Resident,* Common in
Gurney. coastal areas; probably
Brahminy Kite. the most numerous hawk
on the island.

Genus *Accipiter* Brisson

49. *Accipiter badius poliopsis* Rare vagrant. One formal
(Hume). record, 13 December,
Shikra. 1891 (c.n.k.).
50. *Accipiter soloensis* (Horsf.). Scarce winter visitor.
Chinese Goshawk. Formal records in R.M.;
♀, May 1924 (c.n.k.),
and a mounted skin with-
out precise data.
52. *Accipiter virgatus gularis* Winter visitor, usually in
(Temm. & Schleg.). small numbers, Septem-
Japanese Sparrow-Hawk. ber-April. Immature
birds fairly common
October-November in
some years.

Genus *Butastur* Hodgson

54. *Butastur indicus* (Gmel.). Scarce winter visitor.
Greyfaced Buzzard. R.M. formal record,
1899 (c.n.k.).

Genus *Spizaetus* Vieillot

55. *Spizaetus nipalensis alboniger* Occasional visitor, mostly
(Blyth)¹. immature birds.
Mountain Hawk-Eagle.
56. *Spizaetus cirrhatus limnæ-* Resident,* in small num-
tus Horsf. bers. Seen mostly near
Changeable Hawk-Eagle. woodland.

¹. Stresemann (1938: 425-31) revives *Spizaetus nanus* Wallace (Ibis, 1868: 14, pl. 1), type locality Borneo, and considers it distinct from *S. alboniger* which he treats as a species. If this is so it is presumably the commoner *S. nanus* which is resident in hill country in Malaya and occasionally strays southwards to Singapore. Unfortunately the Raffles Museum series is very brief (see Gibson-Hill, 1949a: 104-5), and Stresemann (427) includes a bird said to have been taken by Davison in Singapore, 29 November, 1877 (B.M. coll. 85. 8. 19. 1471), in his list of the examples of *S. alboniger* known to him. For the present the arrangement of Peters (1931: 249), Chasen (1935: 74) and Gibson-Hill (1949b: 39) is therefore followed here.

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Genus *Hieraaëtus* Kaup

57. *Hieraaëtus pennatus* (Gmel.). Rare vagrant. Two formal records in R.M.; January 1889 (*c.n.k.*); no precise data (*c.n.k.*); also turned in by Davison (Hume, 1879: 44).
Booted Eagle.
58. *Hieraaëtus kienerii formosus* Stres. Rare vagrant. Two formal records in R.M.; August 1891 (*c.n.k.*); May 1925 (*c.n.k.*). Chasen (1927: 103) says that it occasionally turns up in Singapore.
Rufousbellied Hawk-Eagle.

Genus *Haliaeetus* Lesson

60. *Haliaeetus leucogaster* (Gmel.). Resident,* fairly plentiful near and on the coast. The most numerous of the larger hawks on Singapore Island.
Whitebellied Sea-Eagle.

Genus *Ichthyophaga* Lesson¹

62. *Ichthyophaga n. nana* (Blyth). Rare vagrant. At least two old records; the type (Blyth, 1842: 202) and Strickland (1845: 66).
Lesser Fishing-Eagle. Might still occur here.

Genus *Circus* Lacépède

66. *Circus c. cyaneus* (Linn.). Rare vagrant. Only record for Malaya, near Paya Lebar, January 1948 (*Perreau*).
Hen-Harrier.
67. *Circus melanoleucus* (Penn). Scarce winter visitor. Recent record, November 1940 (*Molesworth*).
Pied Harrier.

Genus *Spilornis* G. R. Gray

71. *Spilornis cheela bassus* (Forst.) Resident, very small numbers.
Serpent Eagle.

¹ F. G. H. Allen saw a bird which must be taken to be No. 61, *Ichthyophaga i. ichthyæus* (Horsf.), the Greyheaded Fishing-Eagle, off Loyang, at the east end of the island, on 15 November 1949, while this list was being set up. The pale head and white basal portion of the tail were clearly visible.

Family PANDIONIDAE

Genus Pandion Savigny

72. *Pandion haliaetus* (Linn.) . Occasional visitor. No
 subsp. Singapore specimens a-
 Osprey. vailable for examination.
 Both the northern race
P. h. haliaetus (Linn.)
 and the Australian *P. h.*
cristatus (Vieill.) reach
 Malaya, and probably
 both occur in our area.

Family FALCONIDAE

Genus Microhierax Sharpe

73. *Microhierax fringillarius* Resident, small numbers.
 (Drap.).
 Falconet.

Genus Falco Linné

74. *Falco peregrinus calidus* Lath. Scarce winter visitor.
 Peregrine Falcon.
 75. *Falco tinnunculus* Linn. Scarce winter visitor.
 subsp.
 Kestrel.

Family PHASIANIDAE

The B. M. cat. also lists skins, said to be from Singapore,
 ascribable to the following birds,

(77) *Melanoperdix n. nigra* (Vigors)—♂ & ♀, Purchased.

(83) *Houppifer e. erythrophthalmus* (Raffles)—♂, Gould
 Coll.

Gallus varius (Shaw & Nodd.)—♂, Cantor, per
 Indian Museum.

(86) *Polyplectron malacensis* (Scop.)—♂ & imm. ♀,
 Hume Coll.

(89) *Argusianus a. argus* (Linn.)—♂ & ♀, Hume Coll.

Any, or possibly all, except *Gallus varius* might have been on
 Singapore Island before the latter part of the last century, but it
 is certain that these birds are not here now in a feral state.
 Accordingly they are omitted from the present list.

Genus Excalfactoria Bonaparte

78. *Excalfactoria c. chinensis* Resident.* Fairly common
 (Linn.). in open settled country,
 Bluebreasted Button-Quail. but less numerous than
 No. 91a below.

BIRDS OF SINGAPORE ISLAND

Family TURNICIDAE

Genus *Turnix* Bonnaterra

- 91a. *Turnix suscitator atrogularis* Resident.* Fairly common
(Eyton). in open country where
Barred Bustard Quail. there is much high grass;
also enters cultivated
areas.

Family RALLIDAE

Genus *Rallus* Linné

93. *Rallus striatus gularis* Horsf. Resident.* Fairly plentiful
Slatybreasted Rail. in the mangrove belt and
in lalang and scrub near
water inland. The com-
monest rail on the island.

Genus *Rallina* G. R. Gray

94. *Rallina fasciatus* Raffles. Winter visitor, small num-
Malay Banded Crake. bers, in open country; a
few birds probably breed-
ing here.
95. *Rallina eurizonoides nigrili-* Rare vagrant. One formal
neata (G. R. Gray). record, B.M. cat. (Gould
Philippine Banded Crake. Coll.); provenance not
above suspicion but the
bird is a rare winter
visitor to the Malay
Peninsula as a whole.

Genus *Porzana* Vieillot

97. *Porzana f. fusca* (Linn). Resident,* in very small
Ruddy Crake: numbers, in open
country.

Genus *Poliolimnas* Sharpe

99. *Poliolimnas c. cinereus* Resident,* in small num-
(Vieillot). bers, in open swampy
Greybellied Crake. country.

Genus *Amaurornis* Reichenbach

- 100b. *Amaurornis phoenicurus* Resident.* Fairly common
javanica (Horsf.). in lalang wastes, and
Whitebreasted Water-Hen. light open scrub near
fresh water, and in the
mangrove belt.

Genus *Gallicrex* Blyth

101. *Gallicrex cinerea* (Gmel.) Scarce winter visitor.
Watercock. Visual records as late as
2 May (F. G. H. Allen);
an immature bird taken
early August (Moles-
worth).

Genus *Gallinula* Brisson

102. *Gallinula chloropus orientalis* Rare vagrant. One recent
Horsf. record, October 1922
Moorhen. (Sworder).

Genus *Porphyrio* Brisson

103. *Porphyrio poliocephalus viri-* Rare vagrant. One record,
dis Begbie. an immature bird shot
Purple Coot. at Paya Lebar, 1940
(Molesworth, in litt.).

Family JACANIDAE

Genus *Hydrophasianus* Wagler

105. *Hydrophasianus chirurgus* Occasional visitor.
(Scop.).
Pheasant-tailed Jacana.

Family ROSTRATULIDAE

Genus *Rostratula* Vieillot

107. *Rostratula b. benghalensis* Resident, very small num-
(Linn.). bers. Probably much
Painted Snipe. more numerous formerly.

Family CHARADRIIDAE

Genus *Lobivanellus* G R. Gray

108. *Lobivanellus indicus atronu-* Occasional visitor; or pos-
chalis Jerd. sibly a few pairs still
Redwattled Lapwing. resident? Seen winter
1940/41 (Molesworth, in
litt.).

Genus *Squatarola* Cuvier

109. *Squatarola squatarola* Scarce winter visitor, Octo-
(Linn.). ber-March. Mostly on
Grey Plover. open muddy or sandy
shores.

BIRDS OF SINGAPORE ISLAND

Genus *Pluvialis* Brisson

110. *Pluvialis dominica fulva* (Gmel.). Eastern Golden Plover. Winter visitor, September-April, numerous on muddy shores of all kinds. Also frequents suitable open grassland. Earliest arrivals late August; individual records to 25 May.

Genus *Charadrius* Linné

- 111a. *Charadrius dubius curonicus* Gmel. Little Ringed Plover. Winter visitor, September to early April. Widespread in small numbers on open grassland and, more rarely, sheltered shores.
112. *Charadrius a. alexandrinus* Linn. Kentish Plover. Scarce winter visitor. Only recent formal record, 2 ♀♀, Kalang mud-flats, 5 November, 1922 (*de Fontaine*).
114. *Charadrius mongolus atrifrons* Wagl. Lesser Sand-Plover. Winter visitor, late August to April or May. Common on mudflats, muddy shores and in sandpits.
115. *Charadrius leschenaultii* Less. Large Sand-Plover. Winter visitor, in moderate numbers, seen mostly on sandy shores, but occasionally on mud.

Genus *Eupoda* J. F. Brandt

116. *Eupoda veredus* (Gould). Caspian Plover. Rare vagrant. One record, two birds April 1898 (*nat. coll.*).

Family SCOLOPACIDAE

The early records for Malaya, including Singapore Island, of "*Tringa minuta*" (*Hume et al.*) are here taken to refer to No. 139, the Rednecked Stint, *Erolia ruficollis* (Pall.); certainly the Little Stint cannot be accepted for our area. Chasen (1923: 94) lists No. 134, the Common Snipe, *Capella g. gallinago* (Linn.), for Singapore. It almost certainly occurs as a very rare vagrant, but I cannot trace any formal records and it is not included on the present list. No. 129, the Grey-rumped Tatler, *Heteroscelus brevipes* (Vieill.), is also omitted. The only record for Malaya is Sultan Shoal, 11th September, 1923 (*A. W. Hamilton*). There

is no doubt of the validity of the record, but Sultan Shoal is not strictly a part of Singapore Island; as birds known from Pulau Ubin but not from Singapore Island are not included here it is only consistent to exclude the Sultan Shoal birds. The Laridae listed below (Nos. 148 *et seq.*) have all been taken at one time or another on the Singapore coast, or on the fishing stakes built off it.

Genus *Numenius* Brisson

117. *Numenius phaeopus variegatus* (Scop.). Winter visitor, September-April, fairly common on muddy shores and occasionally in mangrove creeks, sandpits and on open grassland.
Eastern Whimbrel.
118. *Numenius arquata orientalis* Brehm. Winter visitor, September-April, in small numbers, mostly seen on open mud flats and beaches.
Eastern Curlew.
119. *Numenius madagascariensis* (Linn.). Rare vagrant. Party of 3 birds seen 5 occasions October-December 1948 (F. G. H. Allen); no formal record.
Australian Curlew.

Genus *Limosa* Brisson

120. *Limosa limosa melanuroides* Gould. Winter visitor, September-April, small numbers, seen mostly in mud creeks in mangrove belt or on open mudflats.
Eastern Blacktailed Godwit.
121. *Limosa lapponica baueri* Naum. Rare vagrant. One formal record, Changi, 23 November ?1879 (Hume, 1880: 118; and B.M. cat, Davison coll.); seen Geylang River Diversion, 5 December, 1948 (F. G. H. Allen).
Eastern Bartailed Godwit.

Genus *Tringa* Linné

122. *Tringa totanus* (Linn.) subsp. Winter visitor, mostly September-March, some August-May, numerous on coastal mudflats and in mangrove areas, and present smaller numbers on sandy beaches; one of the commonest of the visiting waders.
Redshank.

BIRDS OF SINGAPORE ISLAND

123. *Tringa stagnatilis* (Bechst.). Scarce passage migrant.
Marsh Sandpiper. Formal records, October 1910 and April 1911 (both *nat. coll.*). Several visual records October-November (Bromley *et al.*).
124. *Tringa nebularia* Gunn. Winter visitor, probably
Greenshank. October-March, in very small numbers; seen mostly on mud.
125. *Tringa glareola* Linn. Winter visitor, September-
Wood Sandpiper. April, plentiful, mostly on damp, flat land near the coast, or in muddy channels in mangrove.

Genus *Xenus* Kaup

127. *Xenus cinereus* (Güld.). Winter visitor, September-
Avocet-Sandpiper. March or April, in fairly small numbers, mostly seen on mudflats or muddy channels in mangrove.

Genus *Actitis* Illiger

128. *Actitis hypoleucos* (Linn.). Winter visitor, mostly
Common Sandpiper. September-April, some August-May, common and wide-spread. Usually single or in very small parties, but seen almost everywhere on the edge of water.

Genus *Arenaria* Brisson

130. *Arenaria i. interpres* Winter visitor, probably
(Linn.). September-April, in very small numbers, mostly
Turnstone. seen on rocky shores.

Genus *Capella* Frenzel

132. *Capella stenura* (Bp.). Winter visitor, September-
Pintail Snipe. April, fairly common in ~~suitable~~ areas, especially open scrub and rough land.

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133. *Capella megala* (Swinh.). Swinhoe's Snipe. Scarce winter visitor, probably occurring in proportion of 1-200 or 1-250 wherever No. 132 is found. Only formal record April 1941 (*Molesworth*).

Genus *Calidris* Merrem

136. *Calidris c. canutus* (Linn.). Knot. Rare vagrant. Only record for Malaya, November 1940 (*Molesworth*).

Genus *Erolia* Vieillot

139. *Erolia ruficollis* (Pall.). Rednecked Stint. Winter visitor, September to early April, small numbers, muddy and sandy shores. Latest date 18 May (*Molesworth*). Early records (*Hume et al.*) of "*Tringa minuta*" probably refer to this bird.
141. *Erolia subminuta* (Middend.). Longtoed Stint. Winter visitor, September to beginning of April, occurring on both muddy and sandy shores. Common, and much more numerous in our area than No. 139.
142. *Erolia testacea* (Pall.). Curlew-Sandpiper. Largely a passage migrant, August-October and March-April, small numbers, mostly seen on coastal mudflats; a few birds remain all through the winter.

Genus *Limicola* Koch

143. *Limicola falcinellus sibirica* Dress. Broadbilled Sandpiper. Scarce winter visitor. Only recent formal record, Kalang River 1909 (*Ah Wong*).

BIRDS OF SINGAPORE ISLAND

Family RECURVIROSTRIDAE

Genus *Himantopus* Brisson

145. *Himantopus h. himantopus* (Linn.). Rare vagrant. Only certain formal record for Blackwinged Stilt. Malaya, November 1918 (c.n.k.).

Family GLAREOLIDAE

Genus *Glareola* Brisson

147. *Glareola maldivarum* (Forst.). Passage migrant, sometimes fairly plentiful Eastern Pratincole. September - November, less numerous February-March; a few birds may remain all through the winter.

Family LARIDAE

Genus *Larus* Linné

148. *Larus ridibundus* Linn. Scarce winter visitor, Blackheaded Gull. Singapore Strait. Formal records 16 December, 1925 (F. de Souza), 26 January, 1948 (F. G. H. Allen); several visual records.

Genus *Chlidonias* Rafinesque

149. *Chlidonias leucoptera* (Temm.). Rare vagrant. Formal record, 6 December, 1941 Whitewinged Black Tern. (Chasen).

Genus *Gelochelidon* C. L. Brehm

150. *Gelochelidon nilotica affinis* (Horsf.). Rare vagrant. One formal record, 27 October, 1913 (c.n.k.). Gullbilled Tern.

Genus *Sterna* Linné

153. *Sterna s. sumatrana* Raffles. Resident* in very small numbers. Augmented by Blacknaped Tern. winter visitors and then present in small numbers along whole length of Singapore Strait.

154. *Sterna a. anaethetus* Scop. Occasional visitor to local waters. Winter visitor, at times fairly common, both ends of Singapore Strait.

Genus *Thalasseus* Boie

156. *Thalasseus bergii cristatus* (Steph.). Winter visitor, fairly plentiful, whole length of Singapore Strait; the commonest tern in this area. Settles freely on fishing stakes.
157. *Thalasseus b. bengalensis* (Less.). Winter visitor, small numbers, whole length of Singapore Strait. Seen with No. 156 above.

Family COLUMBIDAE

Genus *Treron* Vieillot

163. *Treron c. curvirostra* (Gmel.). Lesser Thickbilled Green Pigeon. Resident, small numbers, occurring mostly in heavily wooded areas; local movements in autumn and winter.
164. *Treron f. fulvicollis* (Wagl.). Cinnamonheaded Green Pigeon. Rare vagrant. Only formal records, May 1899 (Abbott, quoted Riley 1938: 102), and undated (Chasen, 1925: 72).
165. *Treron o. olax* (Temmin.). Little Green Pigeon. Resident, small numbers.
166. *Treron vernans griseicapilla* (Schleg.). Pinknecked Green Pigeon. Resident; plentiful in suitable localities and the commonest pigeon here as elsewhere in the lowlands of Malaya.

Genus *Ptilinopus* Swainson

168. *Ptilinopus jambu* (Gmel.). Pinkheaded Fruit-Dove. Scarce winter visitor, reported from both coastal mangrove and Bukit Timah Forest Reserve.

BIRDS OF SINGAPORE ISLAND

Genus *Ducula* Hodgson

169. *Ducula aenea polius* Resident, small numbers in
Oberh. coastal districts.
Green Imperial Pigeon.
170. *Ducula bicolor* (Scop.). Occasional visitor, reaching
Pied Imperial Pigeon. the west end of the island
and adjacent islets at
wide intervals.

Genus *Streptopelia* Bonaparte

Two adult males of No. 174, the Burmese Red Turtle-Dove, *Streptopelia transquebarica humilis* Temm.), were taken on Singapore Island, December 1940 (*Clunies-Ross*), but they must have been birds that had escaped from captivity.

175. *Streptopelia chinensis* tig- Resident,* plentiful in most
rina (Temm.). kinds of dry open coun-
Spotted Dove. try, including garden
areas.

Genus *Geopelia* Swainson

176. *Geopelia striata striata* Resident,* fairly common
(Linn.). in most open areas, but
Barred Ground-Dove. less often seen near
human habitations.

Genus *Chalcophaps* Gould

177. *Chalcophaps i. indica* Resident, in small numbers
(Linn.). in heavily wooded areas.
Emerald Dove.

Family PSITTACIDAE

Three males of the Redbreasted Paroquet, *Psittacula alexandri* (Linn.) were seen on several occasions on Changi Promontory, August 1943 (*Spittle*, MS note); certainly escaped birds.

Genus *Psittacula* Cuvier

179. *Psittacula l. longicauda* Resident, small numbers in
(Bodd.). wooded areas; formerly
Longtailed Paroquet. common (Kelham, 1881:
387).

Genus *Psittinus* Blyth

180. *Psittinus c. cyanurus* Resident, small numbers in
(Forst.). wooded areas.
Little Malay Parrot.

Genus *Loriculus* Blyth

181. *Loriculus g. galgulus* (Linn.). Resident, very small numbers in lightly wooded areas.
Malay Loricet.

Family CUCULIDAE

The Japanese Cuckoo, *C. canorus telephonus* Heine, is said to have been taken here (Chasen, 1923: 99), but I cannot trace the record, and the bird is not at present admitted to the Malayan list. No. 189a, the Banded Bay Cuckoo, *Penthoceryx sonneratii malayanus* Chas. and Kloss, and No. 189b, the Sumatran Bay Cuckoo, *P. s. fasciolatus* (S. Müll.), have been taken on Pulau Ubin, but there are as yet no formal records for Singapore Island.

There are old records (B.M. cat.) for Singapore of No. 201, Raffles's Malkoha, *Rhinortha chlorophaea* (Raffles) and No. 202, the Redbilled Malkoha, *Zanclostomus javanicus pallidus* Rob. and Kloss, both of which occur fairly widely on the mainland, but there are no other reports of their presence here. It would seem that even if they did occur formerly they are no longer on the island. No. 203, the Chestnutbreasted Malkoha, *Rhamphococcyx curvirostris erythronathus* Bp., might well be present, but there are no formal records for it; it has been reported from Pulau Langkawi, Penang Island and Tioman.

Genus *Clamator* Kaup

182. *Clamator coromandus* (Linn.). Winter visitor, small numbers, November-March.
Redwinged Crested Cuckoo.

Genus *Cuculus* Linné

- 183a. *Cuculus s. sparveriioides* (Vig.). Scarce winter visitor.
Large Hawk-Cuckoo.
- 185a. *Cuculus fugax nasicolor* (Blyth). Winter visitor, small numbers; recorded October-January; probably occurs over a wider period.
Himalayan Hawk-Cuckoo.
186. *Cuculus m. micropterus* Gould. Rare vagrant. One formal record, September (Kelham, 1881: 390).
Indian Cuckoo.
- Genus *Cacomantis* S. Müller
- 190a. *Cacomantis merulinus threnodes* Cab. & Heine. Resident* and winter visitor, in small numbers in lightly wooded areas, including gardens and orchards; more numerous during the winter months.
Brain-fever Bird.

BIRDS OF SINGAPORE ISLAND

191. *Cacomantis variolosus sepulcralis* (S. Müll.). Resident, small numbers.
Fantailed Cuckoo.

Genus *Chalcites* Lesson

193. *Chalcites x. xanthorhynchus* (Horsf.). Resident, small numbers.
Violet Cuckoo. Possibly augmented by winter visitors.
194. *Chalcites basalis* (Horsf.). Rare vagrant. One formal record (*c.n.k.*, no data).
Bronze Cuckoo.

Genus *Surniculus* Lesson

- 196b. *Surniculus lugubris barusarum* Oberh. Resident, small numbers in lightly wooded areas.
Resident Drongo-Cuckoo.

Genus *Eudynamys* Vigors and Horsfield

- 197b. *Eudynamys scolopacea malayana* Cab. & Heine. Winter visitor, small numbers.
Malayan Koel.

Genus *Rhopodytes* Cabanis & Heine

198. *Rhopodytes d. diardi* (Less.). Resident, small numbers in heavily wooded country.
Lesser Greenbilled Malkoha.
199. *Rhopodytes s. sumatranus* (Raffles). Resident. Fairly common in the more heavily wooded areas.
Rufousbellied Malkoha.

Genus *Centropus* Illiger

- 205b. *Centropus sinensis eurycerus* Blyth. Resident.* Common in open country with a vegetation of lalang and *melastoma*.
Large Crow-Pheasant.
206. *Centropus bengalensis javanensis* (Dum.). Resident.* Plentiful in open lalang covered country.
Lesser Crow-Pheasant.

Family TYTONIDAE

Genus *Tyto* Billberg.

207. *Tyto alba javanica* (Gmel.). Rare vagrant. One certain formal record in R.M. 1889 (*c.n.k.*); second doubtful, January 1931 (*purchased skin*).
Barn Owl.

Genus *Phodilus* G. St Hilaire

208. *Phodilus b. badius* (Horsf.). Rare vagrant. One formal record (see Robinson, 1928: 34).
Bay Owl.

Family STRIGIDAE

Chasen (1939: 63) includes Singapore in the range of the Wood-Owl, *Strix s. selo-puto* Horsf. It is a scarce resident in the northern Malay States, and has certainly been taken as far south as Temerloh, in Pahang (*nat. coll.*), but an unsupported claim for Singapore Island must be regarded as dubious (see Checklist, No. 220). Robinson (1910: 7) lists a specimen of the Longeared Owl, *Asio otus* Linn., said to have been taken in Singapore a number of years previously. It is no longer extant, but must presumably have been the *Asio* sp. collected by Ridley in the Botanic Gardens about 1900, and then identified as *A. flammeus* (Ridley, 1901: 105). There is little doubt that it was actually an example of this bird, No. 222 below, which occurs here as a rare vagrant.

Genus *Otus* Pennant

212. *Otus scops malayanus* (Hay.). Probably resident in very small numbers.
Lesser Scops Owl.
213. *Otus bakkamoena lempiji* (Horsf.). Resident.* Common in open wooded areas.
Collared Scops Owl.

Genus *Bubo* Dumeril

214. *Bubo s. sumatrana* (Raffles). Occasional visitor. Formal records in R.M.; July 1893 (*c.n.k.*) and June 1925 (*c.n.k.*).
Eagle Owl.

Genus *Ketupa* Lesson

217. *Ketupa k. ketupu* (Horsf.). Resident, small numbers.
Fish Owl.

Genus *Ninox* Hodgson

- 219c. *Ninox scutulata malaccensis* (Eyton). Resident.* Fairly common, but less numerous than No. 213.
Malayan Hawk-Owl.

Genus *Asio* Brisson

222. *Asio f. flammeus* (Pont.). Rare vagrant. Two recent formal records, January 1930 (*purchased skin*), and November 1940 (*Molesworth*).
Shorteared Owl.

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Family PODARGIDAE

The B.M. cat. lists a skin of Gould's Frogmouth, *B. stellatus* (Gould), No. 224, said to have come from Singapore (Gould coll.): it seems most unlikely that the bird is actually on the island.

Family CAPRIMULGIDAE

Genus Eurostopodus Gould

226. *Eurostopodus temminckii* Gould. Resident; common in open country, away from the town.
Greateared Nightjar.

Genus Caprimulgus Linné

229. *Caprimulgus macrurus bima-* Resident;* common, occurring in the larger gardens as well as open country.
culatus Peale.
Longtailed Nightjar.

Family APODIDAE

Genus Collocalia G. R. Gray

- 233b. *Collocalia francica javensis* Resident,* small numbers; breeding Robinson Road, near the centre of the town.
Stres.¹
Greyrumped Swiftlet.
235. *Collocalia esculenta cyanop-* Resident, small numbers.
tila Oberh.
Whitebellied Swiftlet.

Genus Hirund-Apus Hodgson

237. *Hirund-apus g. gigantea* Occasional visitor. Resident in small numbers on the islands adjacent to Singapore.
(Ternm.).
Spinetail Swift.

Genus Chaetura Stephens

238. *Chaetura leucopygialis* Resident, in small numbers.
(Blyth).
Greyrumped Spinetail
Swift.

¹ Stresemann, Bull. Raff. Mus., 6, 1931, pp. 89-90. Listed as *C. f. amechana* Oberh. in the Malayan checklist (*op. cit.*, 20, 1949). Following further correspondence with Dr. Stresemann I would now place the Singapore and southern Peninsula birds as *javensis* not *amechana*.

Genus *Apus* Scopoli

239. *Apus pacificus* (Lath.) subsp. Immigrant Swift. Winter visitor, small numbers. No formal records on which to determine the subspecies (see Checklist, p. 112).
240. *Apus affinis subfurcatus* (Blyth). House-Swift. Resident.* Plentiful in inhabited areas.

Genus *Cypsiurus* Lesson

241. *Cypsiurus parvus infumatus* (Scat.). Palm Swift. Resident.* Moderately common in coastal districts and adjacent areas.

Family HEMIPROCINIDAE

Genus *Hemiprocne* Nitzsch

242. *Hemiprocne longipennis* har- terti Stres. Crested Tree-Swift. Resident.* Common and widely spread in lightly wooded areas and tree-studded open country.
243. *Hemiprocne c. comata* (Temm.). Whitewiskered Tree-Swift. Resident, in small numbers in or near forest country.

Family TROGONIDAE

There are old records for Singapore Island, established by specimens in the B.M. cat., for three trogons,

- (244) *Harpactes k. kasumba* (Raffles)—Hume coll. (also in Hume 1879: 48).
(245) *H. diardii sumatranus* Blas.—Hume & Gould coll. (also Hume, *loc. cit.*).
(246) *H. o. orrhophaeus* (Cab. & Heine)—Gould coll. (locality queried).

The first two at least are resident in small numbers, on Pulau Ubin, but it is extremely unlikely that they are still on Singapore Island. There do not appear to be any records more recent than those in the B.M. cat., and the birds are accordingly not listed here.

Family ALCEDINIDAE

Four of the kingfishers given below, Nos. 253, 256, 257 and 262, are certainly resident in parts of the Malay States, but they would seem to be only visitors to our area. The fifth visitor, No. 260, the Blackcapped Kingfisher, may possibly be breeding in the

BIRDS OF SINGAPORE ISLAND

northern states, but at present is known formally in the Malay Peninsula only from October to the beginning of May; during this period it is fairly common in all suitable localities.

Genus *Alcedo* Linné

250. *Alcedo atthis bengalensis* Gmel. Resident in small numbers; augmented by winter visitors, October-March, and then plentiful in coastal mangrove areas.
Indian Common Kingfisher.
251. *Alcedo meninting verreauxii* De La Berge. Resident, in very small numbers, found near and in the more heavily wooded areas.
Deepblue Kingfisher.

Genus *Ceyx* Lacépède

253. *Ceyx e. erithacus* (Linn.). Scarce winter visitor.
Blackbacked Kingfisher.
254. *Ceyx r. rufidorsum* Strickland. Resident in very small numbers, Bukit Timah area.
Redbacked Kingfisher.

Genus *Pelargopsis* Gloger

256. *Pelargopsis capensis malaccensis* (Sharpe). Winter visitor, small numbers; more numerous on the larger off-lying islands.
Storkbilled Kingfisher.

Genus *Lacedo* Reichenbach

257. *Lacedo p. pulchella* (Horsf.). Scarce winter visitor.
Banded Kingfisher.

Genus *Halcyon* Swainson

- 258b. *Halcyon coromanda minor* (Temm. and Schleg.). Resident, in small numbers, in mangrove areas.
Ruddy Kingfisher.
259. *Halcyon smyrnensis fusca* (Bodd.). Resident,* plentiful in open country, orchards and gardens; the commonest kingfisher in our area.
Whitebreasted Kingfisher.
260. *Halcyon pileata* (Bodd.). Winter visitor, fairly common, October-March.
Blackcapped Kingfisher.
261. *Halcyon chloris humii* Sharpe. Resident,* very common in the mangrove belt and adjacent districts; well known in gardens up to 3-4 miles from the sea.
Whitecollared Kingfisher.

262. *Halcyon c. concreta* (Temm.). Occasional visitor.
Chestnutcollared Kingfisher.

Family MEROPIDAE

Genus *Merops* Linné

264. *Merops superciliosus philippinus* Linn. Winter visitor, September to early April, plentiful in open country.
Brownbreasted Bee-eater.
265. *Merops v. viridis* Linn. Resident,* common in open country; subject to seasonal movements, and seemingly less numerous in some areas during winter months.
Bluethroated Bee-eater.

Family CORACIIDAE

Genus *Eurystomus* Vieillot

- 268a. *Eurystomus o. orientalis* (Linn.). Resident in small numbers, seen mostly in clearings on the edge of heavily wooded areas; probably augmented by winter visitors, October-April.
Broadbilled Roller
268b. *Eurystomus orientalis abundus* Ripley. Winter visitor. Fairly common in open country and the same habitats as No. 268a above, from late October to April.
Chinese Broadbilled Roller.

Family BUCEROTIDAE

It does not seem likely that a hornbill occurs in our area at the present time, but three species have been recorded from Singapore Island. No. 277, *Anthracoceros coronatus convexus* (Temm.), the Southern Pied Hornbill, is given by Wallace (1855: 98; quoted Salvadori, 1874: 81), No. 278, *Buceros r. rhinoceros* Linn., the Rhinoceros Hornbill, is reported by Diard (*vide* Schlegel, 1862: 4) and Ridley (1898: 78), and No. 280, *Rhinoplax vigil* (Forst.), the Helmeted Hornbill, occurs in the B.M. cat. (*c.n.k.*). If a feral hornbill is still found here it is most likely to be No. 277, the Southern Pied Hornbill, which is also mentioned by Kelham and again by Ridley (1898: 78), or possibly No. 275, *Anthracoceros malayanus* (Blyth), the Black Hornbill, which is

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BIRDS OF SINGAPORE ISLAND

fairly common in south Johore, but there have been no circumstantial records of a hornbill on Singapore Island since Ridley published his note, over fifty years ago. There are also old records of hornbills for Penang, but J. Cairns who has been there for more than twenty-five years says (*in litt.*) that he has not yet encountered one on the island.

Family CAPITONIDAE

There are old records for three additional barbets. Kelham (1881: 390) says that he encountered the Coppersmith Barbet, No. 290, *Megalaima haemacephala indica* (Lath.) near Bukit Timah, but there are no recent records south of the territory of Malacca. Hume (1879: 53) lists the Yellowcrowned Barbet, No. 288, *M. h. henrii* (Temm.), and the B.M. cat. the Gaudy Barbet, No. 285, *M. m. mystacophanos* (Temm.); again there are no subsequent records for Singapore Island and it would seem that the birds are not here now.

Genus *Megalaima* G. R. Gray

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| 284. <i>Megalaima rafflesii malayensis</i> (Chas.).
Many-coloured Barbet. | Resident. Present in small numbers, mostly in thickly wooded country. Common on Pulau Ubin. |
| 289. <i>Megalaima australis duvaucelii</i> (Less.).
Little Barbet. | Resident, in small numbers, in thickly wooded areas round Bukit Timah. |

Genus *Calorhamphus* Lesson

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| 291. <i>Calorhamphus fuliginosus hayii</i> (J. E. Gray).
Brown Barbet. | Resident. Not uncommon in swampy coastal jungle. |
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Family PICIDAE

There is a B.M. cat. record for No. 315, the Maroon Woodpecker, *Blythipicus rubiginosus* (Swains.), Lord Ellenborough and Gould coll., but it has not been reported subsequently.

Genus *Micropternus* Blyth

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| 295. <i>Micropternus brachyurus squamigularis</i> (Sundev.).
Rufous Woodpecker. | Resident* in wooded areas. Certainly scarce now, but apparently formerly fairly common in the old Botanic Gardens. |
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Genus *Picus* Linné

- 297b. *Picus v. vittatus* (Vieill.). Resident, in small numbers. 310.
Bamboo Green Woodpecker. Seen mostly among
casuarinas and mangrove
in the coastal zone, parti-
cularly on the north side
of the island.
300. *Picus puniceus continentis* Resident. Occurs locally in 311.
(Rob. and Kloss). small numbers in some of
Crimsonwinged the less disturbed wooded
Woodpecker. areas.
302. *Picus mentalis humii* Resident. Not very com- 312.
(Harg.). mon; occurs both in the
Checkerthroated mangrove zone and Bukit
Woodpecker. Timah forest reserve.
303. *Picus miniaceus malaccensis* Resident. Small numbers, 313.
(Lath.). seen mostly in or near the
Banded Red Woodpecker. mangrove zone; also re-
ported from Bukit Timah
Forest Reserve.

Genus *Dinopium* Rafinesque

304. *Dinopium j. javanense* Resident. Common, occur-
(Ljungh). ring mostly in cultivated
Goldenbacked Threetoed areas. 316.
Woodpecker.
305. *Dinopium rafflesii peninsu-* Resident. Locally distri- 317b
lare (Hesse.). buted, in small numbers,
Olivebacked Threetoed in thickly wooded areas.
Woodpecker.

Genus *Meiglyptes* Swainson

307. *Meiglyptes tristis grammi-* Resident. Occurs mostly in
thorax (Malh.). thickly wooded areas; not
Fulvousrumped numerous.
Woodpecker.
308. *Meiglyptes t. tukki* (Less.). Resident. Occurs in wooded
Buffnecked Woodpecker. areas away from the
coast; not plentiful.

Genus *Mülleripicus* Bonaparte

309. *Mülleripicus p. pulverulentus* Resident. Seen mostly in
(Temm.). swampy, wooded areas
Great Slaty Woodpecker. near the coast; not com-
mon.

BIRDS OF SINGAPORE ISLAND

Genus *Dryocopus* Boie

310. *Dryocopus j. javensis* (Horsf.). Resident, but rather scarce.
Great Black Woodpecker.

Genus *Dendrocopos* Koch

311. *Dendrocopos canicapillus auritus* (Eyton). Resident, in very small numbers; seen mostly in open wooded areas.
Pygmy Woodpecker.
312. *Dendrocopos m. moluccensis* (Gmel.). Resident.* Common in some coastal areas; frequents gardens in parts of the suburbs.
Lesser Pygmy Woodpecker.

Genus *Hemicircus* Swainson

313. *Hemicircus concretus sordidus* (Eyton). Resident, but rather scarce.
Grey-and-Buff Woodpecker.

Genus *Chrysocolaptes* Blyth

316. *Chrysocolaptes validus xanthopygius* Finsch. Resident, but very scarce; most likely to be seen in heavily wooded areas.
Orangebacked Woodpecker.
- 317b. *Chrysocolaptes lucidus chersonesus* Kloss. Resident, but very rare. Known in our area only by the paratype and two specimens 16 and 17 May, 1904 (c.n.k., Johore Mus. coll.).
Goldenbacked Fourtoed Woodpecker.

Family EURYLAIMIDAE

Hume (1879: 50) lists two other broadbills, the Black-and-Yellow Broadbill, No. 322, *Eurylaimus o. ochromalus* Raffles, and the Dusky Broadbill, No. 324, *Corydon s. sumatranus* (Raffles), but in neither case are there any subsequent records. The three species given below are now scarce or very rare here and it would seem that the broadbills are among the birds that are disappearing from the island. One (No. 323) may have already gone; the most recent record is over 25 years old.

Genus *Calyptomena* Raffles

- 318a. *Calyptomena v. viridis* Resident, but very rare in 332.
Raffles. our area. Most likely to
Green Broadbill. be seen in the Bukit
Timah forest reserve;
last reported December
1941. Formerly seen
occasionally in the Bo-
tanic Gardens (Ridley,
1898: 85). 333.

Genus *Cymbirhynchus* Vigors

320. *Cymbirhynchus macrorhyn-* Resident. Scarce, but the 335.
chos malaccensis Salvad. most plentiful of the
Black-and-Red Broadbill. broadbills on Singapore
Island.

Genus *Eurylaimus* Horsfield

323. *Eurylaimus javanicus palli-* Resident, but very rare; 337.
us Chas. most likely to be encoun-
Banded Broadbill. tered in open wooded
country. 338.

Family PITTIIDAE

Genus *Pitta* Vieillot

326. *Pitta granatina coccinea* Resident, but not common. 34
Eyton. Usually frequents swam-
Redheaded Pitta. py, wooded areas.
328. *Pitta brachyura cyanoptera* Winter visitor, November-
Temm. March; not very plenti-
Lesser Bluewinged Pitta. ful. 34
329. *Pitta megarhyncha* Schleg. Resident,* in small num-
Large Bluewinged Pitta. bers, occurring in the
mangrove belt. 34
330. *Pitta sordida culcullata* Scarce winter visitor.
Hartl.
Greenbreasted Pitta. 34

Family HIRUNDINIDAE

Genus *Delichon* Horsfield and Moore.

331. *Delichon urbica dasypus* Probably a scarce winter
(Bp.). visitor. Only one record,
Japanese House-Martin. Raffles Place, November
1948 (F. G. H. Allen,
visual). 34

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Genus *Hirundo* Linné

332. *Hirundo rustica gutturalis* Scop. Winter visitor, plentiful late August to April.
Eastern Swallow.
333. *Hirundo tahitica abbotti* (Oberh.). Resident.* Common, but less numerous than No. 332 above during the winter months.
Resident Swallow.

Family CAMPEPHAGIDAE

Genus *Tephrodornis* Swainson

- 335a. *Tephrodornis gularis fretensis* Rob. & Kloss. Resident. Formerly occurring in small numbers in the Bukit Timah area, and assumed to be still present.
Wood-Shrike.

Genus *Coracina* Vieillot

337. *Coracina striata sumatrensis* (S. Müll.). Resident. Small numbers occurring locally in dry coastal scrub.
Barred Cuckoo-Shrike.
- 338a. *Coracina fimbriata culminata* (A. Hay). Resident. Fairly common in wooded areas away from the coastal belt.
Lesser Grey Cuckoo-Shrike.

Genus *Lalage* Boie

341. *Lalage n. nigra* (Forst.). Resident.* Fairly plentiful in open wooded country; often seen in gardens.
Pied Cuckoo-Shrike.

Genus *Pericrocotus* Boie

342. *Pericrocotus roseus divaricatus* (Raffles). Winter visitor, late October to early April. Fairly common.
Ashy Minivet.
344. *Pericrocotus i. igneus* Blyth. Resident, but not common. Seen mostly in wooded coastal areas.
Fiery Minivet.
- 345b. *Pericrocotus flammeus xanthogaster* (Raffles). Resident, in small numbers; found mostly in heavily wooded areas.
Scarlet Minivet.

Family DICRURIDAE

Genus *Dicrurus* Vieillot

346. *Dicrurus annectans* (Hodgs.). Winter visitor, fairly common October to March.
Crowbilled Drongo.

348. *Dicrurus aeneus malayensis* Resident, in small numbers;
(Blyth). found mostly in open
Bronzed Drongo. wooded areas.

Genus *Dissemurus* Gloger

- 350a. *Dissemurus paradiseus pla-* Resident. Fairly common
turus (Vieill.). in open wooded country;
Large Racquet-tailed plentiful round the
Drongo. MacRitchie and Peirce
reservoirs, and on Bukit
Timah.

Family ORIOLIDAE

Genus *Oriolus* Linné

- 351b. *Oriolus chinensis maculatus* Resident.* Plentiful in
Vieill. some areas, especially in
Blacknaped Oriole. gardens and orchards on
the outskirts of the town.
353. *Oriolus x. xanthonotus* Resident. Very scarce and
Horsf. confined to the thickly
Blackheaded Oriole. wooded areas. Last re-
ported in 1941; probably
disappearing from our
area.

Family CORVIDAE

Genus *Platysmurus* Reichenbach

358. *Platysmurus l. leucopterus* Probably resident in small
(Temm.). numbers, frequenting
Whitewinged Black Jay. wooded coastal areas.
No formal records, but
reported visually on
several occasions.

Genus *Corvus* Linné

359. *Corvus m. macrorhynchos* Resident. Not common, but
Wagl. now seen fairly frequently
Largebilled Crow. in open wooded areas
round the town; scarce
before the war.

Family TIMALIIDAE

There are old records of varying probity for six other bab-
blers. In all instances it would seem fairly certain that the bird
is not here now. The records are ascribable to the following
birds,

- (368) *Pellorneum capistratum nigrocapitatum* (Eyton)—
B.M. cat. (Wallace coll.).

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- (379) *Malacopteron a. albogulare* (Blyth)—type only (Blyth, 1844: 385).
 (382) *Kenopia striata* (Blyth)—type only (Blyth, 1842: 793).
 (389) *Macronus p. ptilosus* Jard. and Selb.—cat. Mus. E. I. Co. (Horsfield and Moore, 1854: 225).
 (392) *Stachyris nigricollis erythronotus* (Blyth)—B.M. cat. (Gould coll.); also cat. Mus. A. S. Bengal (Blyth, 1849: 149).
 (394) *Stachyris maculata pectoralis* (Blyth)—B. M. cat. (Gould coll.).

In addition the Brownheaded Tree-Babbler, No. 377, *Malacopteron m. magnirostre* (Moore), has been claimed for Singapore Island (Chasen, 1923: 104); it might possibly be here, but there are at present no formal records, and Chasen does not cite any particulars of a visual one.

Genus *Malacocincla* Blyth

370. *Malacocincla m. malaccensis* (Hartl.). Resident, in small numbers. Probably restricted to wooded areas round Bukit Timah forest reserve.
 Short-tailed Babbler.
 371. *Malacocincla r. rostratum* (Blyth). Resident, occurring mostly in the mangrove belt; fairly common.
 Mangrove Brown Babbler.
 374a. *Malacocincla abbotti olivacea* (Strick.). Resident, occurring mostly in secondary wooded areas. Common.
 Common Brown Babbler.

Genus *Turdinus* Blyth

384. *Turdinus m. macrodactylus* (Strickl.). Resident, in very small numbers, in swampy wooded areas; possibly now occurring only on the north side of the island.
 Largefooted Wren Babbler.

Genus *Macronus* Jardine and Selby

388. *Macronus g. gularis* (Horsf.). Resident, mostly seen in coastal scrub; common in these areas.
 Yellowbreasted Tit Babbler.

Genus *Stachyris* Blyth

395. *Stachyris e. erythroptera* (Blyth). Resident, occurring mostly in dry scrub; fairly common.
 Redwinged Tree Babbler.

Family ÆGITHINIDAE

Genus Ægithina Vieillot

413. *Ægithina v. viridissima* Resident, in small numbers,
(Bp). occurring mostly in
Green Iora. thickly wooded areas.
- 414b. *Ægithina tiphia singapuren-* Resident.* Common in
sis Chas and Kloss. scrub, orchards and simi-
Common Iora. lar open wooded areas.

Genus *Chloropsis* Jardine and Selby

- 416a. *Chloropsis c. cyanopogon* Resident, in small numbers,
(Temm.). probably confined to the
Lesser Green Leaf-Bird. Bukit Timah forest area.
417. *Chloropsis sonnerati zoste-* Resident. Fairly common
rops Vig. in wooded, but not culti-
Greater Green Leaf-Bird. vated, areas, including
the mangrove belt.
418. *Chloropsis cochinchinensis* Resident, in small numbers,
icterocephala Less. in open wooded areas.
Bluewinged Leaf-Bird.

Genus *Irena* Horsfield

420. *Irena puella malayensis* Resident, occurring in small
Horsf. and Moore. numbers in the more
Fairy Bluebird. heavily wooded areas;
common on Bukit Timah.

Family PYCNONOTIDAE

There are old single records for two additional bulbuls which have not been confirmed subsequently, and which are not accepted here. They are ascribable to the following birds,

- (421) *Pycnonotus eutilotus* (Jard. and Selb.)—the type
(Jardine and Selbv, 1836: pl. 3).
- (422) *Pycnonotus melanoleucos* (Eyton)—B. M. cat. (Pur-
chased).

On the other hand, the Yellowcrowned Bulbul, No. 429, *Pycnonotus zeylanicus* (Gmel.), has not been recorded from Singapore Island, though it might well have occurred here in the past, or even be still in our area. It has been reported from Pulau Ubin.

There is a visual record of a third introduced bulbul, but at present no indication that it is breeding on the island. Two

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examples of Hartert's Chinese Bulbul, *Pycnonotus sinensis formosae* Hart., were seen together on open scrubby ground near Kalang airport on 8 April, 1949 (F. G. H. Allen). They were subsequently reported at intervals through the month, and in this period also seen by Bromley and Edgar.

Genus *Pycnonotus* Boie

423. *Pycnonotus a. atriceps* (Temm.).
Blackheaded Bulbul. Resident, in small numbers, in the wooded areas round Bukit Timah at least; possibly still occurring more widely.
426. *Pycnonotus c. cyaniventris* Blyth.
Greybellied Bulbul. Resident, but rather scarce, in open wooded country.
427. *Pycnonotus jocosus erythrotis* (Bp.).
Redwhiskered Bulbul. Introduced about twenty-five years ago and apparently maintaining itself before the recent war; very few post-occupation records.
428. *Pycnonotus cafer aurigaster* (Vieill.).
Goldenvented Bulbul. As for No. 427 above, but only a few pairs were detected. It has not been reported since the war, and may have disappeared.
431. *Pycnonotus goiavier personatus* (Hume).
Yellowvented Bulbul. Resident.* Widespread, in all kinds of open wooded country; one of the commonest birds on the island.
- 433a. *Pycnonotus p. plumosus* Blyth.
Large Olive Bulbul. Resident.* Common in secondary wooded areas and *bēlukar* away from the town.
434. *Pycnonotus b. brunneus* Blyth.
Redeyed Brown Bulbul. Resident. Common and widespread in the more thickly wooded areas.
435. *Pycnonotus s. simplex* Less.
White-eyed Brown Bulbul. Resident. Fairly common in the more thickly wooded areas.
436. *Pycnonotus e. erythrophthalmos* (Hume).
Lesser Olive-brown Bulbul. Resident. Not uncommon, but less plentiful than the preceding two species.

Genus *Criniger* Temminck

439. *Criniger p. phaeocephalus* (Hartl.). Formerly resident, occurring in fairly thickly wooded country; possibly still present, but there are no recent records for it.

Genus *Microscelis* Gray

442. *Microscelis o. olivacea* Blyth. Resident. Fairly common in open wooded areas.

Family TURDIDAE

There are also single records of two thrushes not otherwise known from the Malaysian sub-region. In both cases they must have been escaped birds, and they are not accepted here. Hume (1879: 156) lists a Singapore specimen of *Turdus naumanni* Temm. Kelham (1881: 510) records a specimen of *Turdus ruficollis* Pall. which Davison had shown to him, saying that it was shot in Singapore.

Genus *Copsychus* Wagler

450. *Copsychus saularis musicus* (Raffles). Resident.* Widely distributed and plentiful in open wooded areas, including orchards and gardens, but rather less noticeable than before the war.
451. *Copsychus malabaricus mal- lopercnus* Oberh. Resident in small numbers, occurring mostly in the more thickly wooded areas round the centre of the island.

Genus *Saxicola* Bechstein

455. *Saxicola torquata stejnegeri* (Parrot). Rare vagrant. Visual record 11 and 12 November, 1948 (Bromley); also reported by Kloss (see Robinson, 1910: 17, footnote to 503).

Genus *Turdus* Linné

458. *Turdus o. obscurus* Gmel. Scarce winter visitor.

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Family SYLVIIDAE

Genus *Cisticola* Kaup

466. *Cisticola juncidis malaya* Resident.* Very plentiful
Lynes. in areas of open grass-
Streaked Fantail Warbler. land.

Genus *Prinia* Horsfield

468. *Prinia flaviventris rafflesi* Resident.* Common in
Tweed. areas of open grassland
Yellowbellied sparsely interspersed
Wren-Warbler. with scrub vegetation.

Genus *Locustella* Kaup

471. *Locustella lanceolata* Scarce winter visitor.
(Temm.).
Streaked Grasshopper-
Warbler.

Genus *Acrocephalus* Naumann

472. *Acrocephalus arundinaceus* Winter visitor, fairly com-
orientalis (Temm. & Schleg.). mon in swampy country
Great Reed-Warbler. from October to April.

Genus *Phylloscopus* Boie

474. *Phylloscopus b. borealis* Winter visitor, occurring
(Blas.).¹ widely and in some
Arctic Willow-Warbler. numbers, mostly from
October to April.

Genus *Orthotomus* Horsfield

- 481a. *Orthotomus a. atrogularis* Resident.* Widespread and
Temm. common in scrub and
Blacknecked Tailor-Bird. secondary wooded areas.
482. *Orthotomus sutorius maculi-* Resident.* Plentiful in
collis Moore. areas of scrub vegetation,
Longtailed Tailor-Bird. gardens and orchards;
the commonest tailor-
bird in our area.
483. *Orthotomus sericeus hespe-* Resident. Fairly common
rius Oberh. in scrub and secondary
Redheaded Tailor-Bird. wooded areas.
484. *Orthotomus sepium ruficeps* Resident. Widespread and
(Less.). common in and near the
Ashy Tailor-Bird. mangrove belt.

¹. Birds ascribable to the Alaskan race, *P. borealis kennicotti* Ridg., are probably also reaching Singapore Island; examples have recently been discovered in collections of *P. borealis* from the mainland of Malaya and the islands in the Malacca Strait.

Family MUSCICAPIDAE

The Maroonbreasted Flycatcher, No. 513, *Drymophila velata caesia* (Less.) is recorded by Salvadori (1874: 139), quoting a bird in the Gould collection. It is normally an inhabitant of the more densely wooded sections of forest country, and may possibly have been on Singapore Island a hundred years ago. There are no subsequent records.

Genus *Rhipidura* Vigors and Horsfield

487. *Rhipidura javanica longicauda* Wall.
Pied Fantail-Flycatcher. Resident. Widely spread and fairly common in open wooded country, including gardens and orchards away from the town; very common in mangrove areas.

Genus *Muscicapa* Brisson

494. *Muscicapa l. latirostris* (Raffles).
Brown Flycatcher. Winter visitor, plentiful and widely distributed from October to the beginning of April.
500. *Muscicapa r. rufigastra* (Raffles).
Mangrove Blue Flycatcher. Resident. Apparently restricted to the mangrove belt, where it is fairly plentiful.

Genus *Drymophila* Temminck

512. *Drymophila p. pyrhoptera* (Temm.).
Chestnutwinged Flycatcher. Resident. Fairly common in scrub and wooded areas.

Genus *Hypothymis* Boie

- 514a. *Hypothymis azurea prophata* Oberh.
Blacknaped Blue Flycatcher. Resident, in small numbers. Frequents scrub and thickly wooded areas.

Genus *Terpsiphone* Gloger

- 515a. *Terpsiphone paradisi affinis* (Blyth).
Resident Paradise Flycatcher. Scarce visitor. Said to have been resident on the island formerly.
- 515c. *Terpsiphone paradisi incei* (Gould).
Chinese Paradise Flycatcher. Scarce winter visitor.

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Genus *Pachycephala* Vigors

517. *Pachycephala cinerea buta-* Resident. Fairly common
loides Stres. in the mangrove belt and
Mangrove Flycatcher- its immediate neighbour-
Shrike. hood.

Family MOTACILLIDAE

Genus *Motacilla* Linné

518. *Motacilla cinerea melanope* Winter visitor, common in
Pall. open country from early
Grey Wagtail. September to March;
some birds stay on into
April.
- 519a. *Motacilla flava taivana* Scarce winter visitor.
(Swinh.).
Greenheaded Yellow
Wagtail.
- 519b. *Motacilla flava simillima* Winter visitor, occurring
Hart. widely in moderate num-
Blueheaded Yellow Wagtail. bers from the second half
of September to early
May.

Genus *Dendronanthus* Blyth

520. *Dendronanthus indicus* Passage migrant, fairly
(Gmel.). widely distributed in
Forest Wagtail. wooded areas September-
October and March-
April; some birds present
all through the winter.

Genus *Anthus* Bechstein

522. *Anthus novaeseelandiae ma-* Resident.* Plentiful in
layensis Eyton. grassland and similar
Malay Pipit. open country.

Family LANIIDAE

Hume (1879: 57) lists a specimen ascribable to the Grey-
backed Shrike, No. 523, *Lanius schach bentet* Horsf., which is
said to have been taken on Singapore Island. The bird is a
rather scarce resident in the northern Malay States, and there are
no other formal records south of Kuala Lumpur. It seems prob-
able that the skin is wrongly localised.

Genus *Lanius* Linné

524. *Lanius cristatus* Linn.
subsp.
Brown Shrike.

Winter visitor, occurring fairly widely from October to end of April. Examples of three races have been taken on Singapore Island (*L. c. cristatus* Linn., *L. c. lucionensis* Linn., and *L. c. superciliosus* Lath.), but it is not at present possible to say with certainty which is the commonest in our area; possibly it is the last of these, *L. c. superciliosus*, arriving by way of the China Sea islands or the west coast of Borneo.

525. *Lanius tigrinus* Drap.
Thickbilled Shrike.

Winter visitor in small numbers, seen mostly in shady situations and woodland on the borders of open country, from late September to April.

Family STURNIDAE

Robinson (1910: 18) lists "*Sturnia malabarica* (Gm.)" and "*Sturnia nemoricola* (Jerd.)" for the Malay Peninsula on the strength of information given to him by Dr. Hanitsch that they were present on Singapore Island. The two specimens in question (30 October, 1891, and January 1892, both *c.n.k.*) are still in the Raffles Museum collection; they are immature females of *Sturnus sinensis* (Gmel.), No. 528 below. This list also takes no cognisance of *Gracupica m. melanoptera* (Daud.) and *G. m. tricolor* (Horsf.), which would seem to be based on a single immature ♀ of *melanoptera*, presumably an escaped cage-bird, taken on 20 July, 1920 (*de Fontaine*).

Genus *Aplonis* Gould

526. *Aplonis panayensis strigatus* (Horsf.). Resident.* Widely distributed, and in parts very plentiful.
Glossy Tree-Starling.

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Genus *Sturnus* Linné

527. *Sturnus sturninus* (Pall.). Winter visitor from about the middle of September to March. The numbers vary considerably, but large flocks are sometimes seen.
Daurian Starling.
528. *Sturnus sinensis* (Gmel.). Winter visitor, varying in numbers much as No. 527 above does.
Chinese Starling.

Genus *Acridotheres* Vieillot

- 530a. *Acridotheres fuscus torquatus* (Davison). Resident. Fairly common in some areas on the outskirts of the town.
Buffalo Myna.
- 530b. *Acridotheres fuscus javanicus* (Cab.). Introduced before 1925 (Chasen, 1925: 73). Now flourishing and well-established.
Javanese Myna.
532. *Acridotheres t. tristis* (Linn.). Resident.* Plentiful in a few areas. Apparently a recent spread southwards down the Malay Peninsula.
Common Myna.

Genus *Gracula* Linné

533. *Gracula r. religiosa* Linn. Resident, in small numbers in the wooded areas round Bukit Timah.
Tiong.

Family NECTARINIIDAE

There are also old records for two additional sunbirds and a spider-hunter. They have not been confirmed subsequently, and are not accepted here. They are ascribable to the following birds,

- (534) *Anthreptes s. simplex* (S. Müll.)—Salvadori (1874: 173).
(536) *Anthreptes r. rhodolaema* Shelley—Hume (1879: 56), a trade skin.
(549) *Arachnothera c. chrysogenys* (Temm.)—Hume (1879: 55), and B.M. cat. (Gould coll.).

On the other hand the Rubycheeked Sunbird, No. 538, *Anthreptes s. singalensis* (Gmel.) may possibly be here (*vide* Robinson, 1927: 312), and the Greater Yelloweared Spiderhunter, No. 548, *Arachnothera flavigaster* (Eyton), which is known to occur on Pulau Ubin. In neither case, however, do there appear to be any formal records available.

Genus *Anthreptes* Swainson

535. *Anthreptes m. malacensis* Resident.* Common in
(Scop.). coastal districts, mostly,
Brownthroated Sunbird. but not invariably, in the
neighbourhood of coconut
palms.
537. *Anthreptes m. macularia* Resident, in small numbers.
Blyth. Found mostly in wooded
Purplenaped Sunbird. areas away from the
coast.

Genus *Leptocoma* Cabanis

539. *Leptocoma b. brasiliana* Resident. Not uncommon
(Gmel.). in coastal districts; also
Van Hasselt's Sunbird. present on Bukit Timah.
540. *Leptocoma c. calcostetha* Resident. Plentiful in parts
(Jard.). of the coastal belt, occur-
Macklot's Sunbird. ring mostly among man-
grove or coconut palms.
- 541a. *Leptocoma jugularis micro-* Resident.* Very plentiful
leuca (Oberh.). near the coast, and fre-
Yellowbreasted Sunbird. quently seen in gardens
in this region; the com-
monest sunbird on the
island.

Genus *Aethopyga* Cabanis

543. *Aethopyga s. siparaja* Resident.* Plentiful in
(Raffles). coastal areas, mostly in
Raffles's Sunbird. coconut plantations or
coastal scrub; also fairly
common on Bukit Timah.

Genus *Arachnothera* Temminck

545. *Arachnothera l. longirostra* Resident. Present in small
(Lath.). numbers in wooded areas
Little Spider-hunter. and scrub on the borders
of cultivated ground.
546. *Arachnothera crassirostris* Presumably resident. Only
(Reichenb.). one record for our area,
Lesser Thickbilled Spider- Jurong, 28 August, 1920
hunter. (c.n.k.), but this is one
of the rarest of the
spider-hunters in the
Malay States.

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550. *Arachnothera affinis modesta* (Eyton). Resident,* in small numbers in open wooded country.
 Greybreasted Spider-hunter.

Family DICAEDIDAE

Genus *Dicaeum* Cuvier

552. *Dicaeum cruentatum ignitum* (Begg.). Resident.* Common in cultivated areas and secondary woodland.
 Scarletbacked Flower-pecker.
554. *Dicaeum t. trigonostigmum* (Scop.). Resident. Very common in open areas where there are flowering trees and shrubs.
 Orangebellied Flower-pecker.
555. *Dicaeum c. chrysorrheum* Temm. Resident, in small numbers. Seen mostly in open scrub.
 Yellowvented Flower-pecker.
556. *Dicaeum concolor borneanum* Lonn. Resident. Not common in Malaya, and in our area known from only two specimens, July 1893 (c.n.k.) and 15 January (Tan Kian Soe).
 Plaincoloured Flower-pecker.

Genus *Anaimos* Reichenbach

559. *Anaimos m. maculatus* (Temm.). Resident in small numbers, occurring mostly in thickly wooded areas.
 Yellowthroated Flower-pecker

Family ZOSTEROPIDAE

Genus *Zosterops* Vigors & Horsfield

- 562a. *Zosterops palpebrosa williamsoni* Rob and Kloss. Resident.* Common in mangrove areas along the coast, and in open wooded localities, including large gardens, several miles inland.
 Coast White-Eye

Family PLOCEIDAE

Hume (1880: 118) records the Scarlet Amandavat, *Amandava amandava* (Linn.), as plentiful on Singapore Island when Davison was collecting for him, giving the names *Estrela amandava* (Linn.) and *E. flaviventris* Wallace, but he is of the

opinion that the birds had been introduced. They do not appear to have been able to maintain themselves, and they were certainly not feral on the island in the inter-war period. Escapes do, however, still occur, probably of the Javanese *Amandava amandava punicea* (Horsf.), which is imported in some numbers as a caged bird. F. G. H. Allen and Bromley both give post-war visual records of a pair (♂ ♀) of Scarlet Amandavats from the neighbourhood of the Kalang airport, but there is no indication that the birds are breeding there.

Genus *Passer* Linné

564. *Passer montanus malaccensis* Dubois.
Malayan Tree-Sparrow. Resident.* Widely spread and very plentiful in the neighbourhood of human habitations. May also occur away from them, and is possibly the most numerous resident bird on the island.

Genus *Padda* Reichenbach

565. *Padda o. oryzivora* (Linn).
Java Sparrow. Introduced. Largely restricted to the town area, where it mixes freely with No. 564 above. Less plentiful since the war, but still common in a number of localities.

Genus *Munia* Hodgson

566. *Munia atricapilla sinensis* Blyth.
Blackheaded Munia. Resident.* Fairly common on or near open grassland.
567. *Munia m. maja* (Linn.).
Whiteheaded Munia. Resident.* In parts plentiful on open grassland.
568. *Munia punctulata fretensis* Kloss.
Spotted Munia. Resident.* Plentiful on open grassland and *bêlukar*, especially near human habitations; enters gardens freely.
569. *Munia striata subsquamicollis* (Baker).
Sharptailed Munia. Resident. Occurs mostly in kampong areas and grassland interspersed with patches of woodland. Fairly common, but less numerous than the preceding species.

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- 570b. *Munia leucogastra leucogastroides* Horsf. and Moore. Introduced* Common in a few localities, mostly scrub or broken grassland near to human habitations.
Javanese Whitebellied *Munia*.

Genus *Ploceus* Cuvier

573. *Ploceus philippinus infornatus* Hart. Resident.* Common and fairly widely distributed on the edges of grassland.
Weaver-Finch.

Appendix

Birds for which there is direct evidence of breeding in our area are marked on the foregoing list with an asterisk after the designation "Resident". The following notes summarise the data at present available, and where possible give the references to published sources or summaries. Records ascribed to Spittle were obtained on the Changi Promontory, at the north-east corner of the island, during his detention there as a military prisoner-of-war from 10 December, 1942 to the end of May 1944. Data collected by Gibson-Hill in the Sime Road area were obtained in or near the civilian internment camp adjacent to the golf course between May 1944 and August 1945. Some of the records given by Ridley (1898) are not accepted here as it is not certain from his account that they refer to nesting on Singapore Island. In addition, in Ridley's day the Botanic Gardens were larger and much more attractive to birds. A few of the species which he saw there, such as the Green Broadbill (318a), are now seldom encountered anywhere on the island. Others like the Southern Pied Hornbill (278) have not been recorded by any subsequent author.

The total amount of information available is disappointingly small. About 151 birds are almost certainly resident on Singapore Island, and a further 5 are probably resident here. Nevertheless we have records for only 59, and in many species these are single notes of one nest or even of fledglings barely able to fly. It would seem that at least the great majority of the birds breed, or have their peak laying period, somewhere between January and August, but in most cases we cannot pin it down precisely. There are less than 15 birds for which we have over 20 dated nesting records at the present time, and only 6 for which we have more than 40 records (Nos. 240, 333, 431, 466, 541a and 568).

15a. Bromley (*in litt.*) reports locally-bred juveniles seen in the Kalang mangrove area on 29 April.

26. Spittle (MS notes) reports a nest with eggs found on Bukit Sembawang estate, near Changi; information from E. K. Allin; date not known.

48. Nest with young near Bedok, February (Gibson-Hill). 22
56. Ridley (1898: 74) records breeding in the Botanic Gardens, the same nest being used for over 9 years. 23
60. Nest reported by Molesworth (*in litt.*) circa April 1940; adult birds photographed. Ridley (1898: 73) says a pair nested in the Botanic Gardens for many years. 24
78. Three clutches, or part clutches, found in lalang in the Sime Road area, late September and October; two eggs found in the same locality in January (Gibson-Hill). 24
- 91a. Spittle (MS notes) reports a nest with eggs found by Allin on 8 August; a young chick taken on 22 January; and parties of immature birds seen 24 April and late July. Gibson-Hill (MS notes) records remains of a clutch found in lalang in the Sime Road area in August, and a single egg, same locality, in October. Chasen (1927: 44) says that the breeding season in Singapore appears to be May-July. 25
93. Spittle (MS notes) reports a juvenile seen in the mangrove belt on Changi Promontory on 19 April. Chasen (1927: 69) mentions nestlings taken on Singapore Island in June. 26
97. Gibson-Hill (MS notes) reports four nests, clutches 5-6 eggs, found on lalang and *Melastoma* slopes in the Sime Road area between the beginning of September and the middle of October. 26
99. Gibson-Hill (MS notes) reports three nests, clutches 4-5 eggs, found in the same area as those of No. 97 above, between the middle of June and the beginning of July. 29
- 100b. Two chicks seen with an adult in a lalang-covered valley, Sime Road area, on 15 May (Molesworth *in litt.*). Chasen (1927: 71) says that it formerly bred in the Botanic Gardens. 31
153. F. G. H. Allen reports three pairs breeding on Squance Rock (Batu Puteh) off Loyang; eggs, 2 c/2 and 1 c/3, present on 12 June, 1949. 32
163. Chasen (1927: 54) reports a female taken in February which contained fully developed eggs. 33
166. Spittle (MS notes) reports a nest, with the bird sitting, discovered by E. K. Allin on 6 May. Gibson-Hill (MS notes) records a nest in the Sime Road area, eggs hatched 22 June. 34
175. Breeding known widely. Eggs reported for all months from February to August. Spittle (MS notes) suggests a peak laying period from February to April inclusive. 35
176. Gibson-Hill (MS notes) and Spittle (MS notes) both report eggs or young birds February, March, May and June; Gibson-Hill records a post-nest juvenile seen early in August. 41
- 190a. Chasen (1927: 148) records a nestling taken from the nest of the Common Iora; no other data. 41
- 205b. Dr. Molesworth found a young fledgling in a lalang slope in the Sime Road area in August 1944 (Gibson-Hill, MS notes). 41
206. Spittle (MS notes) reports nests with eggs found in March and April, and post-nest juveniles found in February, June and early October. 41
213. Breeding reported by Ridley (1898: 76) without precise data. A family party with two juveniles found in the Sime Road area about the middle of July, 1944 (Gibson-Hill, MS notes). 41
- 219c. Robinson (1927: 84) reports nestlings taken by F. N. Chasen on 23 April; no other data. 41

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229. Gibson-Hill (MS notes) reports eggs, 2 $\frac{1}{2}$, found near the bases of *Melastoma* bushes on lalang slopes in the Sime Road area in May. Ridley (1898: 77) says June is the usual breeding season.
- 233b. Small colony in an office building in Robinson Road; according to the caretaker the birds breed all through the year; presence confirmed December 1948, but not investigated further.
240. Breeding known widely. Spittle (MS notes) reports occupied nests seen from 16 December to 15 August. Possible peak laying period from April to June.
241. Several records of nests without dates. F. G. H. Allen reports nest with eggs found in May.
242. Breeding reported from Sime Road area, egg hatched about 23 May (see Gibson-Hill, 1950b).
259. Bird seen digging in September and October, but both tunnels ultimately abandoned. Nests with young found in February and March (Gibson-Hill, MS notes).
261. Several undated records. Spittle (MS notes) reports a nest that had 3 nestlings in it on 9 May, 3 eggs on 13 July and 2 young plus 1 addled egg on 9 May the following year.
265. Spittle (MS notes) reports birds digging in a disused sand-pit near Changi village, late March. Ridley (1898: 78) says it formerly nested in sand-pits on the Serangoon Road.
295. Ridley (1898: 79) records breeding in the nest of a tree-ant in the old Botanic Gardens.
312. Three single nests reported from Sime Road area, late May, July and late August (Gibson-Hill, MS notes).
329. Chasen (1939: 198) reports eggs seen in the middle of May and juveniles at the beginning of June.
333. Breeding known widely. Eggs mostly laid in the period February to June inclusive, but occasional clutches completed outside these dates. Double-brooded. Sometimes using the same nest.
341. Several records of breeding. Eggs mostly laid in the period February to July inclusive. Spittle (MS notes) says that this bird is double brooded; sometimes uses the same nest.
- 351b. Breeding known widely. Eggs laid over period December to June at least. Probably double-brooded.
- 414b. Spittle (MS notes) reports an inaccessible nest, probably containing young, found in April. Family parties observed in Sime Road area in May and July (Gibson-Hill, MS notes). The nest is seemingly difficult to spot; Ridley (1898: 85) says that he never saw one though the bird was certainly breeding in the Botanic Gardens in his day.
431. Breeding known widely. Spittle (MS notes) reports occupied nests found from the beginning of February to the end of April. This covers the first peak period. The bird is certainly normally double-brooded and there are a number of records of nests with eggs or young birds in June, July and August; latest dates, a bird sitting on 9 September and young barely able to fly seen on 23-25 September (Gibson-Hill, MS notes).
- 433a. Breeding reported by Ridley (1898: 85).
450. Several records of breeding. Eggs laid over period January to July at least. Probably double-brooded.

466. Breeding reported by Gibson-Hill and Spittle. Eggs normally laid over period March to August inclusive, with the majority of the nests active between June and August (*see* Gibson-Hill 1950a).
468. Spittle (MS notes) reports 3 nests in period April to June. Gibson-Hill (MS notes) 2 nests with eggs early June and 1 found on 27 June.
- 481a. Reported breeding Sime Road area 1944; precise data lost (Gibson-Hill, MS notes).
482. Several records of breeding. Eggs laid over period February to September. Spittle (MS notes) reports nest building in January. Probably 3 broods in a year (Gibson-Hill, MS notes).
522. Spittle (MS notes) reports eggs from March to June, with nests found under construction in February and a fledgling seen in July. Double-brooded.
526. Several records of breeding, but without precise data.
532. Several records of breeding. Spittle (MS notes) reports eggs laid over the period February to July, with birds seen carrying nesting material at different times from 15 January to 1 September. Certainly 2, sometimes 3, broods in a year.
535. Spittle (MS notes) reports nests with eggs or young found on 16 February, 26 April and 4 May.
- 541a. Breeding known widely. Eggs laid in the period from January to September, at least, with periods of augmented activity from January to March and July to September (*see* Gibson-Hill 1950a).
543. Molesworth (*in litt.*) reports a nest with 3 eggs found in March 1941.
550. Reported breeding in the Sime Road area in June (Gibson-Hill, MS notes). Ridley (1898: 86) describes nesting in the Botanic Gardens, month not stated.
552. Spittle (MS notes) reports a fledgling being fed on 19 February. Gibson-Hill (MS notes) reports a fledgling barely able to fly on 24 September.
554. A fledgling just able to fly seen on 19 May (Gibson-Hill).
562. Reported breeding Sime Road area 1944; precise data lost (Gibson-Hill, MS notes).
564. Breeding known widely. Probably nests more or less continuously all through the year.
566. Spittle (MS notes) reports a nest with eggs found by E. K. Allin on 6 May.
567. Several records of breeding. Eggs laid in the period from February to July inclusive at least. Certainly 2, possibly 3, broods in a year.
568. Breeding known widely. Eggs laid in the period February to September at least. Nest building noted from January onwards, and by Spittle (MS notes) as late as September. Probably 3 or more broods in a year.
- 570b. Spittle (MS notes) reports family party of 4 fledglings being fed by an adult on 27 June. Gibson-Hill (MS notes) reports nests with eggs and young in the Sime Road area in July, and family parties with 3 and 4 fledglings seen in September and October. F. G. H. Allen reports single nests with young found at Kampong Loyang in October and May.
573. Nests and cock bird swings known fairly widely, but apparently there are not yet any dated records for breeding in our area.

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The following list comprises the principal works consulted in preparing the foregoing list. Those authors who supplied additional information in letters or MS notes have been marked with an asterisk. Owing to the confusion likely to arise from the changes in authorship from volume to volume, the British Museum Catalogue of Birds (1874-95, 27 vols.) is referred to in the text merely as "B. M. cat.", without acknowledgement of authorship; it is not, therefore, included in this list.

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1. Mr. Spittle very kindly placed a copy of his MS notes at the disposal of the present writer, and these were used during the preparation of this checklist. Subsequently a condensed version of the notes, including in it nearly all the original data on nidification, has been prepared for publication in this Journal and is printed on pages 184-204. Page references to Mr. Spittle's paper have not been inserted in the present paper in view of the technical difficulties involved, but Mr. Spittle uses Malayan Checklist numbers throughout his paper, as here, and it should therefore be fairly easy for workers to find the corresponding sections.